

Claims

1. A medicament dispenser device for use in the delivery of a combination medicament product, the device comprising

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a first medicament container for containing a first medicament component;

a first release means for releasing the contents of said first medicament container;

10 at least one further medicament container for containing at least one further medicament component; and

at least one further release means for releasing the contents of each said at least one further medicament container;

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wherein the first medicament component is kept separate from the at least one further medicament component until the point of release thereof for delivery in combination, and wherein the dispenser device additionally comprises

20 at least one actuation indicator associated with the first medicament container and / or the at least one further medicament container.

2. A medicament dispenser device according to claim 1, wherein the device comprises only at least one further medicament dispenser.

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3. A medicament dispenser device according to either of claims 1 or 2, wherein the at least one actuation indicator associates directly with the first medicament container and the at least one further medicament container.

4. A medicament dispenser device according to either of claims 1 or 2, wherein the at least one actuation indicator associates indirectly with the first medicament container and the at least one further medicament container.
5. A medicament dispenser device according to any of claims 1 to 4, wherein a single actuation indicator associates with both the first medicament container and the at least one further medicament container.
6. A medicament dispenser device according to any of claims 1 to 4, wherein a single actuation indicator associates with the first medicament container only and the first medicament container and at least one further medicament container are coupled such that actuation of the first medicament container also results in actuation of the at least one further medicament container.
7. A medicament dispenser device according to claim 6, wherein the dispenser device comprises an actuator coupling that acts such as to couple an actuating movement of the first and the at least one further medicament container.
8. A medicament dispenser device according to claim 7, wherein said coupling actuator comprises a lever arranged to act on both the first and the at least one further medicament container to enable release of medicament therefrom.
9. A medicament dispenser device according to claim 6, wherein the dispenser device comprises fixing means for fixedly coupling the movement of the first and the at least one further medicament container together.
10. A medicament dispenser device according to claim 6, wherein the dispenser device comprises a meter coupling that acts such as to couple a metering movement relative to the first and the at least one further medicament container.

11. A medicament dispenser device according to claim 10, wherein the first and the at least one further medicament container each have bulk reservoir form and said metering movement is that of one or more metering means moveable relative to the first and the at least one further medicament container for metering medicament 5 therefrom.

12. A medicament dispenser device according to claim 6, wherein the dispenser device comprises a dose advancement coupling that acts such as to couple a dose advancement movement relative to the first and the at least one further medicament 10 container.

13. A medicament dispenser device according to claim 12, wherein the first and the at least one further medicament container each comprise a pack carrying multiple individual doses of medicament and said dose advancement movement 15 results in advancement of a next accessible dose of each pack.

14. A medicament dispenser device according to claim 6, wherein the dispenser device comprises a dose access coupling that acts such as to couple a dose access movement relative to the first and the at least one further medicament container.

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15. A medicament dispenser device according to claim 14, wherein the first and the at least one further medicament container each comprise a pack carrying multiple individually accessible doses of medicament and said dose access movement enables access to a next accessible dose of each pack.

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16. A medicament dispenser device according to any of claims 6 to 9, wherein the single actuation indicator is arranged to detect an actuation step relating to the first medicament container.

17. A medicament dispenser device according to any of claims 6 to 9, wherein the single actuation indicator is arranged to detect the release of medicament from one (e.g. the first) medicament container.

5 18. A medicament dispenser device according to any of claims 10 to 15, wherein the single actuation indicator is arranged to detect a pre-actuation step relating to the first medicament container.

10 19. A medicament dispenser device according to any of claims 1 to 4, wherein the first and the at least one further medicament container each have an actuation indicator associated therewith.

15 20. A medicament dispenser device according to claim 19, wherein each actuation indicator is arranged to detect an actuation step relating to each medicament container.

21. A medicament dispenser device according to claim 19, wherein each actuation indicator is arranged to detect a pre-actuation step relating to each medicament container.

20 22. A medicament dispenser device according to claim 19, wherein each actuation indicator is arranged to detect medicament release from each medicament container.

25 23. A medicament dispenser device according to any of claims 1 to 22, wherein the at least one actuation indicator comprises an actuation sensor.

24. A medicament dispenser device according to claim 23, wherein the actuation sensor senses a parameter selected from the group consisting of electro magnetic radiation, magnetic field, light, motion, temperature, pressure, sound, oxygen concentration, carbon dioxide concentration, moisture and any combinations thereof.

25. A medicament dispenser device according to any of claims 1 to 24, wherein the at least one actuation indicator comprises a release sensor for detecting medicament release from the first and / or at least one further medicament container.

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26. A medicament dispenser device according to any of claims 1 to 25, wherein the actuation indicator comprises a visual display unit for display of dose count information.

10 27. A medicament dispenser device according to any of claims 1 to 26, wherein the device in the form of an inhaler device.

28. A medicament dispenser according to claim 27, wherein the inhaler device is in the form of a device selected from the group consisting of a reservoir dry powder inhaler (RDPI), a multi-dose dry powder inhaler (MDPI), a metered dose inhaler (MDI), a liquid spray inhaler (LSI) and any hybrids thereof.

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29. A medicament dispenser according to either of claims 27 or 28 comprising a single outlet for delivery of the combination medicament product to the respiratory tract of a patient.

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30. A medicament dispenser according to any of claims 27 to 29, actuatable in response to an inward breath of a patient.

25 31. A medicament dispenser according to any one of claims 1 to 30, wherein the first medicament container contains a first medicament component and the at least one further medicament container contains at least one further medicament component.

32. A medicament dispenser according to claim 31, wherein said first medicament component comprises a bronchodilator and said at least one further medicament component comprises an anti-inflammatory.

5 33. A medicament dispenser according to claim 32, wherein said bronchodilator is a beta-agonist and said anti-inflammatory is a steroid.

34. A medicament dispenser according to claim 33, wherein said bronchodilator is selected from the group consisting of salbutamol, salmeterol, formoterol and any
10 salts or solvates thereof and mixtures thereof.

35. A medicament dispenser according to either of claims 33 or 34, wherein said anti-inflammatory is selected from the group consisting of a beclomethasone ester, fluticasone ester, budesonide and any salt or solvates thereof and mixtures thereof.

15 36. Use of a medicament dispenser according to any of claims 1 to 35 for dispensing a combination medicament product.